are examined, and the influence of glacial periods is considered.—M. A. CHRYSLER.

Some abnormal pines.—BOODLE[26] has described an abnormality obtained from a specimen of *Pinus Laricio* growing in the Kew Gardens. Most of the foliage of the tree is normal, but pairs of concrescent leaves are produced every year in considerable number. The fusion of the two leaves seems to be very much as has been described for the double needles of *Sciadopitys*.

WORSDELL[27] has described a remarkable shoot of *Pinus Thunbergii* grown in England. Some of the scale leaves bear ordinary axillary spur shoots with two needles, but a majority of them subtend a very different axillary structure, the most frequent form being "a swollen fleshly foliar organ arching outwards over or against the subtending scale leaf." Another form which the axillary shoot assumes is that of a pair of transversely placed fleshy leaves. The phenomenon of the recurved leaf and its origin by the uniting of the first two leaves of an axillary shoot by their adaxial margins is additional proof of the accepted character of the ovuliferous scale of the Abietineae.—J. M. C.

Death camas.—This name is applied to species of *Zygadenus* to distinguish them from *Quamasia* and *Calochortus*, which were also known as camas, and were much used for food by the Indians. Reports of the poisoning of stock from eating the roots and leaves of the species of *Zygadenus* led to its investigation by MARSH and CLAWSON.[28] It seems that *Zygadenus* grows abundantly on many of the stock ranges of the west, and is one of the most important sources of loss to sheepmen. All the species are poisonous, through the whole season of their growth. The toxicity of the bulbs and tops is about the same, while the seeds are much more toxic than any other part of the plant. The poisonous principle is an alkaloid or alkaloids allied to veratrin and cevadin. Sheep, cattle, and horses are poisoned by the plant, but the fatalities are almost entirely confined to sheep.—J. M. C.

Thelephoraceae.—BURT[29] has begun the publication of a monograph of the North American Thelephoraceae. The first three papers contain a general discussion of the limitations of the family, a key to the genera, 23 of which are recognized, and a presentation of three genera. The genera presented are *Thelephora*, with 23 species, 3 of which are new; *Craterellus*, with 18 species, 6 of which are new; and *Cyphella*, with 21 species, 5 of which are new.—J. M. C.

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[26] BOODLE, L. A., Concrescent and solitary foliage leaves in *Pinus*. New Phytol. **14**:19–22. *figs. 4.* 1915.

[27] WORSDELL, W. C., An abnormal shoot of *Pinus Thunbergii* Parl. New Phytol. **14**:23–26. *figs. 5.* 1915.

[28] MARSH, C. D., CLAWSON, A. B., and MARSH, H., *Zygadenus*, or death camas. Bull. U.S. Dept. Agric. no. 125. pp. 46. 1915.

[29] BURT, E. A., The Thelephoraceae of North America. I, II, III. Annals Mo. Bot. Gard. **1**:185–228, 327–350, 357–382. *pls. 4, 5, 15–17, 19.* 1914.